



FortiOS - Release Notes

Version 6.2.11

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FortiOS 6.2.11 Release Notes

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Change Log

| Date | Change Description |
|------------|--------------------|
| 2022-06-22 | Initial release. |

Introduction and supported models

This guide provides release information for FortiOS 6.2.11 build 1303.

For FortiOS documentation, see the [Fortinet Document Library](#).

Supported models

FortiOS 6.2.11 supports the following models.

| | |
|-----------------------------|--|
| FortiGate | FG-30E, FG-30E_3G4G_INTL, FG-30E_3G4G_NAM, FG-30E-MG, FG-40F, FG-40F-3G4G, FG-50E, FG-51E, FG-52E, FG-60E, FG-60E-DSL, FG-60E-DSLJ, FG-60E-POE, FG-60F, FG-61E, FG-61F, FG-80E, FG-80E-POE, FG-80F, FG-80F-BP, FG-80F-POE, FG-81E, FG-81E-POE, FG-81F, FG-81F-POE, FG-90E, FG-91E, FG-92D, FG-100D, FG-100E, FG-100EF, FG-100F, FG-101E, FG-101F, FG-140D, FG-140D-POE, FG-140E, FG-140E-POE, FG-200E, FG-201E, FG-300D, FG-300E, FG-301E, FG-400D, FG-400E, FG-400E-BP, FG-401E, FG-500D, FG-500E, FG-501E, FG-600D, FG-600E, FG-601E, FG-800D, FG-900D, FG-1000D, FG-1100E, FG-1101E, FG-1200D, FG-1500D, FG-1500DT, FG-2000E, FG-2200E, FG-2201E, FG-2500E, FG-3000D, FG-3100D, FG-3200D, FG-3300E, FG-3301E, FG-3400E, FG-3401E, FG-3600E, FG-3601E, FG-3700D, FG-3800D, FG-3810D, FG-3815D, FG-5001D, FG-3960E, FG-3980E, FG-5001E, FG-5001E1 |
| FortiWiFi | FWF-30E, FWF-30E_3G4G_INTL, FWF-30E_3G4G_NAM, FWF-40F, FWF-40F-3G4G, FWF-50E, FWF-50E-2R, FWF-51E, FWF-60E, FWF-60E-DSL, FWF-60E-DSLJ, FWF-60F, FWF-61E, FWF-61F, FWF-80F-2R, FWF-81F-2R, FWF-81F-2R-POE |
| FortiGate Rugged | FGR-30D, FGR-35D, FGR-60F, FGR-60F-3G4G, FGR-90D |
| FortiGate VM | FG-SVM, FG-VM64, FG-VM64-ALI, FG-VM64-ALIONDEMAND, FG-VM64-AWS, FG-VM64-AWSONDEMAND, FG-VM64-AZURE, FG-VM64-AZUREONDEMAND, FG-VM64-GCP, FG-VM64-GCPONDEMAND, FG-VM64-HV, FG-VM64-KVM, FG-VM64-OPC, FG-VM64-RAXONDEMAND, FG-VMX, FG-VM64-XEN |
| Pay-as-you-go images | FOS-VM64, FOS-VM64-HV, FOS-VM64-KVM, FOS-VM64-XEN |

Special branch supported models

The following models are released on a special branch of FortiOS 6.2.11. To confirm that you are running the correct build, run the CLI command `get system status` and check that the `Branch point` field shows 1303.

| | |
|----------------|----------------------------|
| FG-80D | is released on build 5207. |
| FG-200F | is released on build 7241. |
| FG-201F | is released on build 7241. |

Special notices

- [New Fortinet cloud services](#)
- [FortiGuard Security Rating Service](#)
- [Using FortiManager as a FortiGuard server on page 8](#)
- [FortiGate hardware limitation](#)
- [CAPWAP traffic offloading](#)
- [FortiClient \(Mac OS X\) SSL VPN requirements](#)
- [Use of dedicated management interfaces \(mgmt1 and mgmt2\)](#)
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- [SSL traffic over TLS 1.0 will not be checked and will be bypassed by default on page 10](#)
- [FortiGate 80D release on page 10](#)
- [FortiGate 100D transceiver information removed on page 10](#)

New Fortinet cloud services

FortiOS 6.2.0 introduced several new cloud-based services listed below. The new services require updates to FortiCare and Fortinet's FortiCloud single sign-on (SSO) service.

- [Overlay Controller VPN](#)
- [FortiGuard Cloud-Assist SD-WAN Interface Bandwidth Monitoring](#)
- [FortiManager Cloud](#)
- [FortiAnalyzer Cloud](#)

FortiGuard Security Rating Service

Not all FortiGate models can support running the FortiGuard Security Rating Service as a Fabric "root" device. The following FortiGate platforms can run the FortiGuard Security Rating Service when added to an existing Fortinet Security Fabric managed by a supported FortiGate model:

- FGR-30D
- FGR-35D
- FGT-30E
- FGT-30E-MI
- FGT-30E-MN
- FGT-50E
- FGT-51E

- FGT-52E
- FWF-30E
- FWF-30E-MI
- FWF-30E-MN
- FWF-50E
- FWF-50E-2R
- FWF-51E

Using FortiManager as a FortiGuard server

If you use FortiManager as a FortiGuard server, and you configure the FortiGate to use a secure connection to FortiManager, you must use HTTPS with port 8888. HTTPS with port 53 is not supported.

FortiGate hardware limitation

FortiOS 5.4.0 reported an issue with the FG-92D model in the *Special Notices > FG-92D High Availability in Interface Mode* section of the release notes. Those issues, which were related to the use of port 1 through 14, include:

- PPPoE failing, HA failing to form.
- IPv6 packets being dropped.
- FortiSwitch devices failing to be discovered.
- Spanning tree loops may result depending on the network topology.

FG-92D does not support STP. These issues have been improved in FortiOS 5.4.1, but with some side effects with the introduction of a new command, which is enabled by default:

```
config global
    set hw-switch-ether-filter <enable | disable>
```

When the command is enabled:

- ARP (0x0806), IPv4 (0x0800), and VLAN (0x8100) packets are allowed.
- BPDUs are dropped and therefore no STP loop results.
- PPPoE packets are dropped.
- IPv6 packets are dropped.
- FortiSwitch devices are not discovered.
- HA may fail to form depending the network topology.

When the command is disabled:

- All packet types are allowed, but depending on the network topology, an STP loop may result.

CAPWAP traffic offloading

CAPWAP traffic will not offload if the ingress and egress traffic ports are on different NP6 chips. It will only offload if both ingress and egress ports belong to the same NP6 chip. The following models are affected:

- FG-900D
- FG-1000D
- FG-2000E
- FG-2500E

FortiClient (Mac OS X) SSL VPN requirements

When using SSL VPN on Mac OS X 10.8, you must enable SSLv3 in FortiOS.

Use of dedicated management interfaces (*mgmt1* and *mgmt2*)

For optimum stability, use management ports (*mgmt1* and *mgmt2*) for management traffic only. Do not use management ports for general user traffic.

NP4lite platforms

FortiOS 6.2 and later does not support NP4lite platforms.

Tags option removed from GUI

The Tags option is removed from the GUI. This includes the following:

- The *System > Tags* page is removed.
- The *Tags* section is removed from all pages that had a *Tags* section.
- The *Tags* column is removed from all column selections.

L2TP over IPsec on certain mobile devices

| Bug ID | Description |
|--------|--|
| 459996 | Samsung Galaxy Tab A 8 and Android 9.0 crash after L2TP over IPsec is connected. |

PCI passthrough ports

| Bug ID | Description |
|--------|---|
| 605103 | PCI passthrough ports order might be changed after upgrading. This does not affect VMXNET3 and SR-IOV ports because SR-IOV ports are in MAC order by default. |

SSL traffic over TLS 1.0 will not be checked and will be bypassed by default

FortiOS 6.2.6 and 6.4.3 ended support for TLS 1.0 when `strong-crypto` is enabled under `system global`. With this change, SSL traffic over TLS 1.0 will not be checked so it will be bypassed by default.

To examine and/or block TLS 1.0 traffic, an administrator can either:

- Disable `strong-crypto` under `config system global`. This applies to FortiOS 6.2.6 and 6.4.3, or later versions.
- Under `config firewall ssl-ssh-profile`:
 - in FortiOS 6.2.6 and later, set `unsupported-ssl` to `block`.
 - in FortiOS 6.4.3 and later, set `unsupported-ssl-negotiation` to `block`.

FortiGate 80D release

The FortiGate 80D released in 6.2.9 and later includes the removal of the LTE modem feature using the USB port on that model.

FortiGate 100D transceiver information removed

FortiOS 6.2.10 has removed the display of transceiver information on the *Network > Interfaces* page and the `get system interface transceiver` command.

New features or enhancements

| Bug ID | Description |
|--------|--|
| 613155 | Add two-factor authentication support to VPN IKEv2 for remote RADIUS and LDAP users. |
| 745135 | <p>Provide three sizes of internet service databases and an option to choose between full, standard, and mini databases. The FortiGate 30 and 50 series can only configure the mini size.</p> <pre>config system global set internet-service-database {mini standard full} end</pre> |

Upgrade Information

Supported upgrade path information is available on the [Fortinet Customer Service & Support site](#).

To view supported upgrade path information:

1. Go to <https://support.fortinet.com>.
2. From the *Download* menu, select *Firmware Images*.
3. Check that *Select Product* is *FortiGate*.
4. Click the *Upgrade Path* tab and select the following:
 - *Current Product*
 - *Current FortiOS Version*
 - *Upgrade To FortiOS Version*
5. Click *Go*.

FortiGate 30E and 50E flash card space optimization

On FortiGate 30 and 50 series models, the flash and /data partition may run out of space, that can cause errors after upgrade. The following models are affected:

- FortiGate 30E and 50E series
- FortiWifi 30E and 50E series
- FortiGate Rugged 30D and 35D

To resolve this issue:

1. Install the GEOIP V2 Database on FortiGate 30 and 50 models, which uses less space on the flash card than the GEOIP v3 Database installed on other models.
2. Provide a smaller Internet Service Database (ISDB) specifically for the FortiGate 30 and 50 models, and force these models to use this smaller ISDB.
3. Move the IPS Database to the /data2 partition to reduce space on the /data partition.

To upgrade successfully:



The output of disk spaced used in the partitions requires the use of a debug build and internal command. They are shown as reference only, based on a FortiGate 51E.

1. Since the initial state of the /data partition on the flash card is close to 100%, manually delete the GEOIP Database to avoid upgrade failure or loss of configuration files when upgrading the firmware:

```
# diagnose geoip delete-geoip-db  
This operation will delete the Geoip Database and reboot the system!
```

```

Only super admin has the permission with the command.
Do you want to continue? (y/n)y
Admin:admin
Password: *****
File /etc/geoip_db.gz deleted successfully.
After reboot, please update to the latest GeoDB version from FortiGuard server, with
command 'execute update-geo-ip'.
If connection to FortiGuard is not available, please upgrade the FOS firmware after
reboot.
#
The system is going down NOW !!

```

The FortiGate will automatically restart to free up space. Do not run `execute update-geo-ip` after the system reboots and before you perform the upgrade.

Note the partition size before and after the GEOIP Database is deleted.

| | |
|--------|------------|
| Before | 97% /data |
| | 93% /data2 |
| After | 82% /data |
| | 93% /data2 |

2. Upgrade the FortiGate to the new firmware. Once completed, the GEOIP V2 Database is installed. Verify the installation:

```

# diagnose autoupdate versions | grep -A 2 Geography
IP Geography DB
-----
Version: 2.00114

```

3. The new firmware will force the FortiGate 30 and 50 models to use the smaller ISDB. Update the ISDB to the smaller database using FortiGuard:

```
# execute update-now
```

Once updated, additional space under the /data2 partition is available. Note the partition size before and after the smaller ISDB is installed.

| | |
|--------|------------|
| Before | 84% /data |
| | 95% /data2 |
| After | 85% /data |
| | 76% /data2 |

4. Manually restart the FortiGate to allow the IPS Database to move to the /data2 partition.
The space used in the /data and /data2 partitions are now reduced compared to before the upgrade.

FortiClient Endpoint Telemetry license

Starting with FortiOS 6.2.0, the FortiClient Endpoint Telemetry license is deprecated. The FortiClient Compliance profile under the Security Profiles menu has been removed as has the Enforce FortiClient Compliance Check option under each interface configuration page. Endpoints running FortiClient 6.2.0 now register only with FortiClient EMS 6.2.0 and compliance is accomplished through the use of Compliance Verification Rules configured on FortiClient EMS 6.2.0 and enforced through the use of firewall policies. As a result, there are two upgrade scenarios:

- Customers using only a FortiGate device in FortiOS 6.0 to enforce compliance must install FortiClient EMS 6.2.0 and purchase a FortiClient Security Fabric Agent License for their FortiClient EMS installation.
- Customers using both a FortiGate device in FortiOS 6.0 and FortiClient EMS running 6.0 for compliance enforcement, must upgrade the FortiGate device to FortiOS 6.2.0, FortiClient to 6.2.0, and FortiClient EMS to 6.2.0.

The FortiClient 6.2.0 for MS Windows standard installer and zip package containing FortiClient.msi and language transforms and the FortiClient 6.2.0 for macOS standard installer are included with FortiClient EMS 6.2.0.

Fortinet Security Fabric upgrade

FortiOS 6.2.11 greatly increases the interoperability between other Fortinet products. This includes:

- FortiAnalyzer 6.2.5
- FortiClient EMS 6.2.3 and later
- FortiClient 6.2.3 and later
- FortiAP 5.4.4 and later
- FortiSwitch 3.6.11 and later

When upgrading your Security Fabric, devices that manage other devices should be upgraded first. Upgrade the firmware of each device in the following order. This maintains network connectivity without the need to use manual steps.

1. FortiAnalyzer
2. FortiManager
3. Managed FortiExtender devices
4. FortiGate devices
5. Managed FortiSwitch devices
6. Managed FortiAP devices
7. FortiClient EMS
8. FortiClient
9. FortiSandbox
10. FortiMail
11. FortiWeb
12. FortiADC
13. FortiDDOS
14. FortiWLC



If the Security Fabric is enabled, then all FortiGate devices must be upgraded to 6.2.11. When the Security Fabric is enabled in FortiOS 6.2.11, all FortiGate devices must be running FortiOS 6.2.11.

Minimum version of TLS services automatically changed

For improved security, FortiOS 6.2.11 uses the `ssl-min-proto-version` option (under `config system global`) to control the minimum SSL protocol version used in communication between FortiGate and third-party SSL and TLS services.

When you upgrade to FortiOS 6.2.11 and later, the default `ssl-min-proto-version` option is TLS v1.2. The following SSL and TLS services inherit global settings to use TLS v1.2 as the default. You can override these settings.

- Email server (`config system email-server`)
- Certificate (`config vpn certificate setting`)
- FortiSandbox (`config system fortisandbox`)
- FortiGuard (`config log fortiguard setting`)
- FortiAnalyzer (`config log fortianalyzer setting`)
- LDAP server (`config user ldap`)
- POP3 server (`config user pop3`)

Downgrading to previous firmware versions

Downgrading to previous firmware versions results in configuration loss on all models. Only the following settings are retained:

- operation mode
- interface IP/management IP
- static route table
- DNS settings
- admin user account
- session helpers
- system access profiles

Amazon AWS enhanced networking compatibility issue

With this enhancement, there is a compatibility issue with 5.6.2 and older AWS VM versions. After downgrading a 6.2.11 image to a 5.6.2 or older version, network connectivity is lost. Since AWS does not provide console access, you cannot recover the downgraded image.

When downgrading from 6.2.11 to 5.6.2 or older versions, running the enhanced NIC driver is not allowed. The following AWS instances are affected:

| | | | |
|------|-------------|------|---------------|
| C5 | Inf1 | P3 | T3a |
| C5d | m4.16xlarge | R4 | u-6tb1.metal |
| C5n | M5 | R5 | u-9tb1.metal |
| F1 | M5a | R5a | u-12tb1.metal |
| G3 | M5ad | R5ad | u-18tb1.metal |
| G4 | M5d | R5d | u-24tb1.metal |
| H1 | M5dn | R5dn | X1 |
| I3 | M5n | R5n | X1e |
| I3en | P2 | T3 | z1d |

A workaround is to stop the instance, change the type to a non-ENA driver NIC type, and continue with downgrading.

FortiLink access-profile setting

The new FortiLink `local-access` profile controls access to the physical interface of a FortiSwitch that is managed by FortiGate.

After upgrading FortiGate to 6.2.11, the `interface allowaccess` configuration on all managed FortiSwitches are overwritten by the default FortiGate `local-access` profile. You must manually add your protocols to the `local-access` profile after upgrading to 6.2.11.

To configure `local-access` profile:

```
config switch-controller security-policy local-access
    edit [Policy Name]
        set mgmt-allowaccess https ping ssh
        set internal-allowaccess https ping ssh
    next
end
```

To apply `local-access` profile to managed FortiSwitch:

```
config switch-controller managed-switch
    edit [FortiSwitch Serial Number]
        set switch-profile [Policy Name]
        set access-profile [Policy Name]
    next
end
```

FortiGate VM with V-license

This version allows FortiGate VM with V-License to enable `split-vdom`.

To enable `split-vdom`:

```
config system global
    set vdom-mode [no-vdom | split vdom]
end
```

FortiGate VM firmware

Fortinet provides FortiGate VM firmware images for the following virtual environments:

Citrix XenServer and Open Source XenServer

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiGate VM installation.
- `.out.OpenXen.zip`: Download the 64-bit package for a new FortiGate VM installation. This package contains the QCOW2 file for Open Source XenServer.
- `.out.CitrixXen.zip`: Download the 64-bit package for a new FortiGate VM installation. This package contains the Citrix XenServer Virtual Appliance (XVA), Virtual Hard Disk (VHD), and OVF files.

Linux KVM

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiGate VM installation.
- `.out.kvm.zip`: Download the 64-bit package for a new FortiGate VM installation. This package contains QCOW2 that can be used by `qemu`.

Microsoft Hyper-V

- `.out`: Download the 64-bit firmware image to upgrade your existing FortiGate VM installation.
- `.out.hyperv.zip`: Download the 64-bit package for a new FortiGate VM installation. This package contains three folders that can be imported by Hyper-V Manager on Hyper-V 2012. It also contains the file `fortios.vhd` in the Virtual Hard Disks folder that can be manually added to the Hyper-V Manager.

VMware ESX and ESXi

- `.out`: Download either the 64-bit firmware image to upgrade your existing FortiGate VM installation.
- `.ovf.zip`: Download either the 64-bit package for a new FortiGate VM installation. This package contains Open Virtualization Format (OVF) files for VMware and two Virtual Machine Disk Format (VMDK) files used by the OVF file during deployment.

Firmware image checksums

The MD5 checksums for all Fortinet software and firmware releases are available at the Customer Service & Support portal, <https://support.fortinet.com>. After logging in select *Download > Firmware Image Checksums*, enter the image file name including the extension, and select *Get Checksum Code*.

FortiGuard update-server-location setting

The FortiGuard `update-server-location` default setting is different between hardware platforms and VMs. On hardware platforms, the default is `any`. On VMs, the default is `usa`.

On VMs, after upgrading from 5.6.3 or earlier to 5.6.4 or later (including 6.0.0 or later), `update-server-location` is set to `usa`.

If necessary, set `update-server-location` to use the nearest or low-latency FDS servers.

To set FortiGuard `update-server-location`:

```
config system fortiguard
  set update-server-location [usa|any]
end
```

FortiView widgets

FortiView widgets have been rewritten in 6.2.0. FortiView widgets created in previous versions are deleted in the upgrade.

Product integration and support

The following table lists FortiOS 6.2.11 product integration and support information:

| | |
|---|--|
| Web Browsers | <ul style="list-style-type: none">• Microsoft Edge• Mozilla Firefox version 93• Google Chrome version 95 Other web browsers may function correctly, but are not supported by Fortinet. |
| Explicit Web Proxy Browser | <ul style="list-style-type: none">• Microsoft Edge• Mozilla Firefox version 93• Google Chrome version 95• Microsoft Internet Explorer version 11 Other web browsers may function correctly, but are not supported by Fortinet. |
| FortiManager | See important compatibility information in Fortinet Security Fabric upgrade on page 14 . For the latest information, see FortiManager compatibility with FortiOS in the Fortinet Document Library. Upgrade FortiManager before upgrading FortiGate. |
| FortiAnalyzer | See important compatibility information in Fortinet Security Fabric upgrade on page 14 . For the latest information, see FortiAnalyzer compatibility with FortiOS in the Fortinet Document Library. Upgrade FortiAnalyzer before upgrading FortiGate. |
| FortiClient: <ul style="list-style-type: none">• Microsoft Windows• Mac OS X• Linux | <ul style="list-style-type: none">• 6.2.0 See important compatibility information in FortiClient Endpoint Telemetry license on page 14 and Fortinet Security Fabric upgrade on page 14 . FortiClient for Linux is supported on Ubuntu 16.04 and later, Red Hat 7.4 and later, and CentOS 7.4 and later. If you are using FortiClient only for IPsec VPN or SSL VPN, FortiClient version 5.6.0 and later are supported. |
| FortiClient iOS | <ul style="list-style-type: none">• 6.2.0 and later |
| FortiClient Android and FortiClient VPN Android | <ul style="list-style-type: none">• 6.2.0 and later |
| FortiAP | <ul style="list-style-type: none">• 5.4.2 and later• 5.6.0 and later |
| FortiAP-S | <ul style="list-style-type: none">• 5.4.3 and later• 5.6.0 and later |
| FortiAP-U | <ul style="list-style-type: none">• 5.4.5 and later |
| FortiAP-W2 | <ul style="list-style-type: none">• 5.6.0 and later |

| | |
|---|--|
| FortiSwitch OS (FortiLink support) | <ul style="list-style-type: none"> • 3.6.9 and later |
| FortiController | <ul style="list-style-type: none"> • 5.2.5 and later Supported models: FCTL-5103B, FCTL-5903C, FCTL-5913C |
| FortiSandbox | <ul style="list-style-type: none"> • 2.3.3 and later |
| Fortinet Single Sign-On (FSSO) | <ul style="list-style-type: none"> • 5.0 build 0306 and later (needed for FSSO agent support OU in group filters) <ul style="list-style-type: none"> • Windows Server 2019 Standard • Windows Server 2019 Datacenter • Windows Server 2019 Core • Windows Server 2016 Datacenter • Windows Server 2016 Standard • Windows Server 2016 Core • Windows Server 2012 Standard • Windows Server 2012 R2 Standard • Windows Server 2012 Core • Windows Server 2008 (32-bit and 64-bit) • Windows Server 2008 R2 64-bit • Windows Server 2008 Core • Novell eDirectory 8.8 |
| FortiExtender | <ul style="list-style-type: none"> • 4.0.0 and later. For compatibility with latest features, use latest 4.0 version. |
| AV Engine | <ul style="list-style-type: none"> • 6.00165 |
| IPS Engine | <ul style="list-style-type: none"> • 5.00267 |
| Virtualization Environments | |
| Citrix | <ul style="list-style-type: none"> • Hypervisor Express 8.1, build 2019-12-04 |
| Linux KVM | <ul style="list-style-type: none"> • Ubuntu 18.04.3 LTS • QEMU emulator version 4.4.4 (Debian 1:4.0+dfsg-0ubuntu9.4) • libvirt (libvirt) 4.0.0 |
| Microsoft | <ul style="list-style-type: none"> • Hyper-V Server 2019 |
| Open Source | <ul style="list-style-type: none"> • XenServer version 4.1 and later |
| VMware | <ul style="list-style-type: none"> • ESX versions 4.0 and 4.1 • ESXi versions 4.0, 4.1, 5.0, 5.1, 5.5, 6.0, 6.5, and 6.7 |

Language support

The following table lists language support information.

Language support

| Language | GUI |
|-----------------------|-----|
| English | ✓ |
| Chinese (Simplified) | ✓ |
| Chinese (Traditional) | ✓ |
| French | ✓ |
| Japanese | ✓ |
| Korean | ✓ |
| Portuguese (Brazil) | ✓ |
| Spanish | ✓ |

SSL VPN support

SSL VPN standalone client

The following table lists SSL VPN tunnel client standalone installer for the following operating systems.

Operating system and installers

| Operating System | Installer |
|--|--|
| Linux CentOS 6.5 / 7 (32-bit & 64-bit) | 2336. Download from the Fortinet Developer Network: https://fndn.fortinet.net . |
| Linux Ubuntu 16.04 / 18.04 (32-bit & 64-bit) | |

Other operating systems may function correctly, but are not supported by Fortinet.



SSL VPN standalone client no longer supports the following operating systems:

- Microsoft Windows 7 (32-bit & 64-bit)
- Microsoft Windows 8 / 8.1 (32-bit & 64-bit)
- Microsoft Windows 10 (64-bit)
- Virtual Desktop for Microsoft Windows 7 SP1 (32-bit)

SSL VPN web mode

The following table lists the operating systems and web browsers supported by SSL VPN web mode.

Supported operating systems and web browsers

| Operating System | Web Browser |
|---|---|
| Microsoft Windows 7 SP1 (32-bit & 64-bit) | Mozilla Firefox version 93 Google Chrome version 95 |
| Microsoft Windows 10 (64-bit) | Microsoft Edge Mozilla Firefox version 93 Google Chrome version 95 |
| Ubuntu 20.04 (64-bit) | Mozilla Firefox version 93 Google Chrome version 95 |
| macOS Monterey 12.0 | Apple Safari version 15 Mozilla Firefox version 93 Google Chrome version 95 |
| iOS | Apple Safari Mozilla Firefox Google Chrome |
| Android | Mozilla Firefox Google Chrome |

Other operating systems and web browsers may function correctly, but are not supported by Fortinet.

SSL VPN host compatibility list

The following table lists the antivirus and firewall client software packages that are supported.

Supported Microsoft Windows XP antivirus and firewall software

| Product | Antivirus | Firewall |
|-----------------------------------|-----------|----------|
| Symantec Endpoint Protection 11 | ✓ | ✓ |
| Kaspersky Antivirus 2009 | ✓ | |
| McAfee Security Center 8.1 | ✓ | ✓ |
| Trend Micro Internet Security Pro | ✓ | ✓ |
| F-Secure Internet Security 2009 | ✓ | ✓ |

Supported Microsoft Windows 7 32-bit antivirus and firewall software

| Product | Antivirus | Firewall |
|--|-----------|----------|
| CA Internet Security Suite Plus Software | ✓ | ✓ |
| AVG Internet Security 2011 | | |
| F-Secure Internet Security 2011 | ✓ | ✓ |
| Kaspersky Internet Security 2011 | ✓ | ✓ |
| McAfee Internet Security 2011 | ✓ | ✓ |
| Norton 360™ Version 4.0 | ✓ | ✓ |
| Norton™ Internet Security 2011 | ✓ | ✓ |
| Panda Internet Security 2011 | ✓ | ✓ |
| Sophos Security Suite | ✓ | ✓ |
| Trend Micro Titanium Internet Security | ✓ | ✓ |
| ZoneAlarm Security Suite | ✓ | ✓ |
| Symantec Endpoint Protection Small Business Edition 12.0 | ✓ | ✓ |

Resolved issues

The following issues have been fixed in version 6.2.11. For inquiries about a particular bug, please contact [Customer Service & Support](#).

Explicit Proxy

| Bug ID | Description |
|--------|---|
| 765761 | Firewall with forward proxy and UTM enabled is sending TLS probe with forward proxy IP instead of real server IP. |

Firewall

| Bug ID | Description |
|--------|--|
| 629529 | Local-in policy session will not update after policy changes. |
| 738584 | Firewall is using the wrong NAT IP address to send out traffic after removing the VIP and its associated policy. |
| 770668 | The packet dropped counter is not incremented for <code>per-ip-shaper</code> with <code>max-concurrent-session</code> as the only criterion and offload disabled on the firewall policy. |

GUI

| Bug ID | Description |
|--------|---|
| 746953 | On the <i>Network > Interfaces</i> page, users cannot modify the TFTP server setting. A warning with the message <i>This option may not function correctly. It is already configured using the CLI attribute: tftp-server.</i> appears beside the <i>DHCP Options</i> entry. |
| 749451 | On the <i>Network > SD-WAN</i> page, the volume sent/received displayed in the charts does not match the values provided from the REST API when the RX and TX values of <code>diagnose sys sdwan intf-sla-log</code> exceed $2^{32}-1$. |

HA

| Bug ID | Description |
|--------|--|
| 627968 | Local-in policy with <code>ha-mgmt-intf-only</code> enabled is not installed properly. |
| 640327 | Duplicate logs are created by both primary and secondary devices for IPsec VPN. |
| 779512 | If the interface name is a number, an error occurs when that number is used as an <code>hbdev</code> priority. |

Intrusion Prevention

| Bug ID | Description |
|--------|---|
| 682071 | IPS signatures not working with VIP in proxy mode. |
| 698247 | Flow mode web filter <code>ovrd</code> crashes and socket leaks in IPS daemon. |
| 715360 | Each time an AV database update occurs (scheduled or manually triggered), the IPS engine restarts on the SLBC secondary blade. |
| 755859 | The IPS sessions count is higher than system sessions, which causes the FortiGate to enter conserve mode. |
| 775696 | Each time an AV database update occurs (scheduled or manual), the IPS engine restarts on the SLBC secondary blade. This stops UTM analysis for sessions affected by that blade. |

IPsec VPN

| Bug ID | Description |
|-------------------|---|
| 715671 | Traffic is failing on dialup VPN IKEv2 with EAP authentication. |
| 726326, 745331 | IPsec server with NP offloading drops packets with an invalid SPI during rekey. |

Log & Report

| Bug ID | Description |
|--------|---|
| 764478 | Logs are missing on FortiGate Cloud from the FortiGate. |

Proxy

| Bug ID | Description |
|--------|---|
| 603874 | WAD may encounter memory corruption issue if the resources allocated by FTS are not cleaned up properly. |
| 692444 | WAD memory leak is caused by missing a close event. The WAD receives a close event from TCP when the SSL port is blocked by the up application layer. If the SSL port input buffer does not have any data, then the close event will get ignored even if the application layer turns off blocking and the SSL port will leak. |
| 693441 | WAD crashes at <code>wad_client_cert_req_act_get</code> when SSL layer configuration is cleaned up after policy matching. |
| 729237 | WAD crash occurs that is related to virtual server traffic. |

Security Fabric

| Bug ID | Description |
|--------|--|
| 686420 | Dynamic address resolution is lost when SDN connector sends <code>sync.callback</code> command to the FortiGate. |
| 690812 | FortiGate firewall dynamic address resolution lost when SDN connector updates its cache. |

SSL VPN

| Bug ID | Description |
|--------|--|
| 677057 | SSL VPN firewall policy creation via CLI does not require setting user identity. |
| 737894 | If there are no users or groups in an SSL VPN policy, the SSL VPN daemon may crash when an FQDN is a destination address in the firewall policy. |
| 771162 | Unable to access SSL VPN bookmark in web mode. |

Switch Controller

| Bug ID | Description |
|--------|--|
| 740661 | FortiGate loses FortiSwitch management access due to excessive configuration pushes. |

System

| Bug ID | Description |
|-------------------|---|
| 627054 | HTTPSD signal 6 crash in cases of long application lists that are greater or equal to the maximum size of 16. |
| 642958 | FG-80E terminates the firewall session abruptly when the end-users download large files. |
| 651626 | A session clash is caused by the same NAT port. It happens when many sessions are created at the same time and they get the same NAT port due to the wrong port seed value. |
| 662239 | FGR-60F-3G4G hardware switch span does not work. |
| 671116 | Lack of null pointer check in NP6XLite driver may lead to kernel panic. Affected models: FG-40F, FG-60F, and FG-101F. |
| 681322 | TCP 8008 permitted by authd, even though the service in the policy does not include that port. |
| 682681 | DSL line takes a long time to synchronize. |
| 703219, 708446 | Kernel panic on FG-101F due to lack of null pointer check on NP6XLite driver. |
| 712321 | Multiple ports flapping when a single interface is manually brought up. Affected platforms: FG-3810D and FG-3815D. |
| 749613 | Unable to save configuration changes, and get <code>failed: No space left on device</code> error on FG-61E, FG-81E, and FG-101E. |
| 749835 | Traffic logs reports ICMP destination as unreachable for received traffic |
| 750171 | Legitimate traffic is unable to go through with NP6 <code>synproxy</code> enabled. |
| 751523 | When changing mode from DHCP to static, the existing DHCP IP is kept so no CLI command is generated and sent to FortiManager. |
| 754951 | Static ARP entry was removed while using DHCP relay. |
| 763185 | High CPU usage on platforms with low free memory upon IPS engine initialization. |
| 765452 | On FG-100F, no event is raised for PSU failure and the diagnostic command is not available. |
| 778474 | <code>dhcpcd</code> is not processing discover messages if they contain a 0 length option, such as 80 (rapid commit). The warning, <code>length 0 overflows input buffer</code> , is displayed. |

Upgrade

| Bug ID | Description |
|--------|---|
| 685705 | After upgrading to 6.2.6, get errors <code>No such file or directory</code> and <code>No space left on device</code> on FWF-50 and FWF-51E. |

User & Device

| Bug ID | Description |
|--------|--|
| 604906 | FortiOS does not prompt for token when using RADIUS and two-factor authentication to connect to IPsec IKEv2. |
| 757883 | FortiGate blocks expired root CA, even if the cross-signed intermediate CA of the root CA is valid. |

VM

| Bug ID | Description |
|--------|---|
| 759300 | gcpd has signal 11 crash at <code>gcpd_mime_part_end</code> . |

Web Filter

| Bug ID | Description |
|--------|---|
| 801792 | IPS daemon has socket FD leaks. |
| 806920 | Incomplete TCP handshake with NP offloading enabled on policies with wireless interfaces. |

WiFi Controller

| Bug ID | Description |
|--------|--|
| 720497 | MAC authentication bypass is not working for some clients. |

Common Vulnerabilities and Exposures

Visit <https://fortiguard.com/psirt> for more information.

| Bug ID | CVE references |
|--------|---|
| 689909 | FortiOS 6.2.11 is no longer vulnerable to the following CVE Reference: <ul style="list-style-type: none">CVE-2022-22306 |
| 695018 | FortiOS 6.2.11 is no longer vulnerable to the following CVE Reference: |

| Bug ID | CVE references |
|--------|---|
| | <ul style="list-style-type: none">• CVE-2022-22306 |
| 707951 | FortiOS 6.2.11 is no longer vulnerable to the following CVE Reference: <ul style="list-style-type: none">• CVE-2021-41032 |
| 763982 | FortiOS 6.2.11 is no longer vulnerable to the following CVE Reference: <ul style="list-style-type: none">• CVE-2021-43081 |
| 764221 | FortiOS 6.2.11 is no longer vulnerable to the following CVE Reference: <ul style="list-style-type: none">• CVE-2021-43206 |

Known issues

The following issues have been identified in version 6.2.11. For inquiries about a particular bug or to report a bug, please contact [Customer Service & Support](#).

DNS Filter

| Bug ID | Description |
|--------|--|
| 582374 | License shows expiry date of 0000-00-00. |

Explicit Proxy

| Bug ID | Description |
|--------|---|
| 540091 | Cannot access explicit FTP proxy via VIP. |

Firewall

| Bug ID | Description |
|--------|---|
| 654356 | In NGFW policy mode, sessions are not re-validated when security policies are changed. Workaround: clear the session after policy change. |

FortiView

| Bug ID | Description |
|--------|--|
| 635309 | When FortiAnalyzer logging is configured using an FQDN domain, the GUI displays a 500 error message on the FortiView <i>Compromised Hosts</i> page. |
| 673225 | FortiView <i>Top Traffic Shaping</i> widget does not show data for outbound traffic if the source interface's role is WAN. Data is displayed if the source interface's role is LAN, DMZ, or undefined. |

GUI

| Bug ID | Description |
|--------|---|
| 354464 | Antivirus archive logging enabled from the CLI will be disabled by editing the antivirus profile in the GUI, even if no changes are made. |
| 514632 | Inconsistent reference count when using ports in HA <code>session-sync-dev</code> . |
| 529094 | When creating an antispam block/allowlist entry, <i>Mark as Reject</i> should be grayed out. |
| 535099 | The SSID dialog page does not have support for the new MAC address filter. |
| 541042 | Log viewer forwarded traffic does not support multiple filters for one field. |
| 584915 | OK button missing from many pages when viewed in Chrome on an Android device. |
| 584939 | VPN event logs are incorrectly filtered when there are two <i>Action</i> filters and one of them contains "-". |
| 602102 | Warning message is not displayed when a user configures an interface with a static IP address that is already in use. |
| 602397 | Managed FortiSwitch and FortiSwitch <i>Ports</i> pages are slow to load when there are many managed FortiSwitches. This performance issue needs a fix on both FortiOS and FortiSwitch. A fix was provided in FortiOS 7.0.1 GA and FortiSwitch 7.0.1 GA. |
| 621254 | When creating or editing an IPv4 policy or address group, firewall address searching does not work if there is an empty wildcard address due to a configuration error. |
| 664007 | GUI incorrectly displays the warning, <i>Botnet package update unavailable, AntiVirus subscription not found.</i> , when the antivirus entitlement is expiring within 30 days. The actual botnet package update still works within the active entitlement duration. |
| 672599 | After performing a search on firewall <i>Addresses</i> , the matched count over total count displayed for each address type shows an incorrect total count number. The search functionality still works correctly. |
| 682440 | On <i>Firewall Policy</i> list, the tooltip for <i>IP Pool</i> incorrectly shows <i>Port Block Allocation</i> as being exhausted if there are expiring PBAs available to be reallocated. |
| 688994 | The <i>Edit Web Filter Profile</i> page incorrectly shows that a URL filter is configured (even though it is not) if the URL filter entry has the same name as the web filter profile in the CLI. |
| 695163 | When there are a lot of historical logs from FortiAnalyzer, the FortiGate GUI <i>Forward Traffic</i> log page can take time to load if there is no specific filter for the time range. Workaround: provide a specific time range filter, or use the FortiAnalyzer GUI to view the logs. |

Intrusion Prevention

| Bug ID | Description |
|--------|--|
| 565747 | IPS engine 5.00027 has signal 11 crash. |
| 586544 | IPS intelligent mode not working when reflect sessions are created on different physical interfaces. |
| 587668 | IPS engine 5.00035 has signal 11 crash. |
| 590087 | When IPS pcap is enabled, traffic is intermittently disrupted after disk I/O reaches IOPS limit. |
| 721462 | Memory usage increases up to conserve mode after upgrading IPS engine to 5.00239. |

Log & Report

| Bug ID | Description |
|--------|---|
| 606533 | User observes <code>FGT internal error</code> while trying to log in or activate FortiGate Cloud from the web UI. |

REST API

| Bug ID | Description |
|--------|---|
| 584631 | REST API admin with token unable to configure HA setting (via login session works). |
| 713445 | For API user tokens with CORS enabled and set to wildcard *, direct API requests using this token are not processed properly. This issue impacts FortiOS version 5.6.1 and later. Workaround: set CORS to an explicit domain. |
| 714075 | When CORS is enabled for REST API administrators, POST and PUT requests with body data do not work with CORS due to the pre-flight requests being handled incorrectly. This only impacts newer browser versions that use pre-flight requests. |

Routing

| Bug ID | Description |
|--------|--|
| 537354 | BFD/BGP dropping when <code>outbandwidth</code> is set on interface. |

Security Fabric

| Bug ID | Description |
|--------|--|
| 614691 | Slow GUI performance in large Fabric topology with over 50 downstream devices. |

SSL VPN

| Bug ID | Description |
|--------|---|
| 505986 | On IE 11, SSL VPN web portal displays blank page title <i>{{::data.portal.heading}}</i> after authentication. |

Switch Controller

| Bug ID | Description |
|--------|---|
| 588584 | GUI should add support to allow using switch VLAN interface under a tenant VDOM on a managed switch VDOM. |
| 605864 | If the firewall is downgraded from 6.2.3 to 6.2.2, the FortiLink interface loses its CAPWAP setting. |

System

| Bug ID | Description |
|--------|--|
| 464340 | EHP drops for units with no NP service module. |
| 578031 | FortiManager Cloud cannot be removed once the FortiGate has trouble with contract. |
| 595244 | There is duplicate information when checking interface references in global. |
| 600032 | SNMP does not provide routing table for non-management VDOM. |
| 607565 | Interface <code>emac-vlan</code> feature does not work on SoC4 platform. |
| 694202 | <code>stpforward</code> does not work with LAG interfaces on a transparent VDOM. |
| 724085 | Traffic passing through an EMAC VLAN interface when the parent interface is in another VDOM is blocked if NP7 offloading is enabled. If <code>auto-asic-offload</code> is disabled in the firewall policy, then the traffic flows as expected. |

Upgrade

| Bug ID | Description |
|--------|---|
| 658664 | <p>FortiExtender status becomes <code>discovered</code> after upgrading from 6.0.10 (build 0365).</p> <p>Workaround: change the <code>admin</code> from <code>discovered</code> to <code>enable</code> after upgrading.</p> <pre>config extender-controller extender edit <id> set admin enable next end</pre> |

User & Device

| Bug ID | Description |
|--------|---|
| 595583 | Device identification via LLDP on an aggregate interface does not work. |

VM

| Bug ID | Description |
|--------|---|
| 587757 | FG-VM image unable to be deployed on AWS with additional HDD (st1) disk type. |
| 596742 | Azure SDN connector replicates configuration from primary device to secondary device during configuration restore. |
| 605511 | FG-VM-GCP reboots a couple of times due to kernel panic. |
| 608881 | IPsec VPN tunnel not staying up after failing over with AWS A-P cross-AZ setup. |
| 640436 | FortiGate AWS bootstrapped from configuration does not read SAML settings. |
| 668625 | During every FortiGuard UTM update, there is high CPU usage because only one vCPU is available. |
| 685782 | HTTPS administrative interface responds over heartbeat port on Azure FortiGate despite <code>allowaccess</code> settings. |

Limitations

Citrix XenServer limitations

The following limitations apply to Citrix XenServer installations:

- XenTools installation is not supported.
- FortiGate-VM can be imported or deployed in only the following three formats:
 - XVA (recommended)
 - VHD
 - OVF
- The XVA format comes pre-configured with default configurations for VM name, virtual CPU, memory, and virtual NIC. Other formats will require manual configuration before the first power on process.

Open source XenServer limitations

When using Linux Ubuntu version 11.10, XenServer version 4.1.0, and libvir version 0.9.2, importing issues may arise when using the QCOW2 format and existing HDA issues.



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